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ABSTRACT

While most counselor training programs highlight basic counseling skills, few programs address the development of counselors' conceptual abilities. This study explores the changes in conceptualizations of counseling and the corresponding changes in the counseling skills of prepracticum counseling trainees. Six graduate students in a counselor training program participated. Testers administered pretest and posttest assessments on the first and last classes. Researchers then obtained counselor conceptualizations via a cognitive mapping task--a two-step process in which probe questions generate concepts and then the latter are arranged into a pictorial map which illustrates how the concepts relate to the participant's thinking. The small sample size did not permit analysis of relationships between conceptual change and change in skill use, though several relevant observations were made. Primarily, this study provides support for a microcounseling approach to skill training; microcounseling enhanced counseling skill for this group. Changes in structuring skills showed that participants learned to structure their sessions to provide a meaningful context for promoting client insight which in turn facilitated client learning and change. Results suggest that counseling skills could be enhanced by concomitant training in the conceptualization of factors that affect client change. Participants' cognitive maps contained in an appendix. Contains 15 references. (RJM)

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Changes in Counseling Skills and Cognitive Structures of Counselor Trainees

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Paper presented at the annual meetings of the
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Running Head: CHANGES IN COUNSELOR TRAINEES

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Changes in Counseling Skills and Cognitive Structures of Counselor Trainees

The contemporary counseling role necessitates a high level of counseling skill and an ability to conceptualize the vast array of factors influencing client change. While some forum for the development of basic counseling skills has been a central component of most counselor training programs, less attention has been given to the development of counselor conceptual abilities. Generally speaking, there is agreement that training in counseling skills is important (cf. Cook, Bremen, Genco, Repka, & Shrider, 1986; Martin, 1990) and that the focus on skill training has met with success (Baker & Daniels, 1989). However, several writers have pointed to the limitations of a pure skill training model. For example, Roffers, Cooper, and Sultanoff (1988) found that skills trained in simulated settings may not transfer to real-life interactions with clients and Tracey, Hays, Malone, and Herman (1988) found that beginning counselors often use their skills in a rigid manner, without proper concern for the purpose the skills were intended to serve. Observations such as these lead many to emphasize that skills are not enough, or as Mallinckrodt and Nelson (1991) point out, that the ability to cognitively organize client information and relate it to a broad theoretical knowledge base may help counselors form treatment goals that enhance the intentional use of counseling skills.

Counselor educators are beginning to emphasize the need to address the development of the cognitive domain as well (e.g., Cummings, Hallberg, Martin, Slemon, & Hiebert, 1990; Hilderbrand, 1989; Mallinckrodt & Nelson, 1991; Martin, 1990). However, to date there are few studies illustrating the nature of conceptual change experienced by counselor trainees, or what sorts of conceptual changes are associated with the acquisition of counseling skills. Clarification of the sorts of changes that take place in the conceptualizations of counselor trainees and the sort of conceptual change that is associated with

better use of counseling skills will help counselor educators plan training experiences that promote the sort of conceptual change that facilitates skill acquisition.

This study was formulated to explore the factors described above. Specifically, the purpose of this study was to explore the changes in conceptualizations of counseling and the corresponding changes in counseling skills of prepracticum counseling trainees.

Method

Six graduate students, enrolled in the counselor training program at a medium-sized Western Canadian university, volunteered to participate in the study. All participants were female, ranging in age from 32–47, with a Mean age of 41.5. All students had taken an undergraduate course in communication skills, had received training as lay counselor volunteers, and were enrolled in a 13 week prepracticum course entitled "Introduction to Counseling Practice." The focus in the course was on developing a set of basic interviewing and relationship-building skills that could be used in the initial problem exploration and goal setting stages of counseling.

Pretest and posttest assessments were administered on the first and last classes, respectfully. Counseling skill was obtained from a 10 minute video taped interview focusing on information gathering. The video tapes were coded according to the counseling skills taxonomy developed by Martin and Hiebert (1985). The taxonomy produces 13 discrete skill categories grouped into three clusters, namely structuring skills (to enhance client meaningfulness), soliciting skills (to obtain information or engage clients in behavioral practice), and reacting skills (to help clients clarify the meaning and affective dimensions of their experience and to provide clients with feedback on their practice). Three trained research assistants, who were not aware of whether the tape

came from the pretest or posttest, conducted the coding. Interrater agreement on the skill coding was maintained at 92%.

Counselor conceptualization was obtained via a cognitive mapping task (CMT) (Cummings et al., 1990; Martin, Slemon, Hiebert, Hallberg, & Cummings, 1989). The CMT is a two-step process in which concepts are generated in response to a probe questions and then arranged into a pictorial map illustrating how the concepts are related in the participant's thinking. In this study two probe questions were used: "What happens during counseling to help clients change?" and "What are the characteristics of an effective counselor?" Changes in the CMT were explored in tow ways. First, a series of sorting tasks was conducted by trained research assistants who were blind with respect to any identifying information about the maps. The purpose of the sorting tasks was to determine whether pretest and posttest maps would be identifiable from each other and whether the CMT from the two probe questions would be substantially different. A qualitative analysis also was done with the CMT, using procedures similar to those described by Cummings et al., (1990), to investigate the hypotheses that cognitive structures would become more organized and more hierarchical over time.

Results

Counseling Skills

A multivariate analysis (Hotelling's T^2) was conducted on the discrete skills to determine the extent to which skill frequencies changed over time. A significant omnibus T^2 ($T^2(6,5) = 8.42$, $p<.05$) indicated that reliable change occurred. Post hoc univariate tests showed that six skills were responsible for this effect (see Table 1). Two structuring skills increased significantly at post-test: Overview ($F(1,10) = 10.00$, $p<.01$) and Summary ($F(1,10) = 8.45$, $p<.05$). Two soliciting skills also changed significantly in the hypothesized direction:

Closed Questions decreased ($F(1,10) = 30.336$, $p<.01$) and Declarative Probes increased ($F(1,10) = 11.250$, $p<.01$). The reacting skills that showed reliable change were: an increase in Reflecting Meaning ($F(1,10) = 11.951$, $p<.01$) and a decrease in Other Reacting ($F(1,10) = 16.33$, $p<.05$).

Table 1

Group Means of Discrete Counseling Skills

	pre		post			
Skill	M	SD	M	SD	F	p
Overview	0.00	0.00	0.67	0.52	10.00	<.01
Transition	0.17	0.41	0.50	0.84	.77	.40
Summary	0.50	0.84	1.67	0.52	8.45	.02
"Other" Structuring	10.67	0.82	10.17	0.41	1.80	.21
Open Question	4.33	2.34	5.00	2.19	.26	.62
Closed Question	7.17	2.64	0.83	0.98	30.34	<.01
Declarative Probe	0.33	0.52	1.33	0.52	11.25	<.01
"Other" Soliciting	10.17	0.41	10.50	0.84	.77	.40
Paraphrasing	1.50	1.05	1.17	1.17	.27	.61
Reflecting Meaning	1.83	1.47	4.17	0.75	11.95	<.01
Reflecting Affect	0.50	1.23	0.17	0.41	.40	.54
"Other" Reflecting	12.33	2.42	10.00	0.00	5.57	.04

The second category of skill indices assessed proportions of certain skills and skill categories to total skills used. A multivariate analysis (Hotelling's T^2) revealed a significant omnibus T^2 ($T^2(6,5) = 9.553$, $p<.01$) indicating statistically reliable change. Post hoc univariate tests revealed that four of the hypothesized proportional changes were significant: Closed Questions ($F(1,10)$

= 29.474, p<.01), Reflecting Meaning and Affect combined (F(1,10) = 10.12, p<.01), "Other/Uncodable" skills (F(1,10) = 4.892, p<.05), and "Fused" skills (F(1,10) = 14.690, p<.01) (see Table 2).

Table 2

Mean Proportions of Counseling Skills and Skill Categories

	pre		post			
Skill/skill category	M	SD	M	SD	F	p
Structuring/Total	.09	.11	.20	.11	3.22	.10
Open Question/Total	.21	.09	.29	.10	2.24	.17
Closed Question/Total	.37	.13	.05	.06	29.47	<.01
Ref.Aff & Mean/Total	.12	.08	.28	.10	10.12	<.01
"Other" & "Uncodable" Total	.15	.12	.04	.06	4.89	<.05
"Fused"/Total	.42	.08	.18	.13	14.69	<.01

The Hotelling's T^2 performed on the third category of skill indices, skill categories, did not produce statistically significant results.

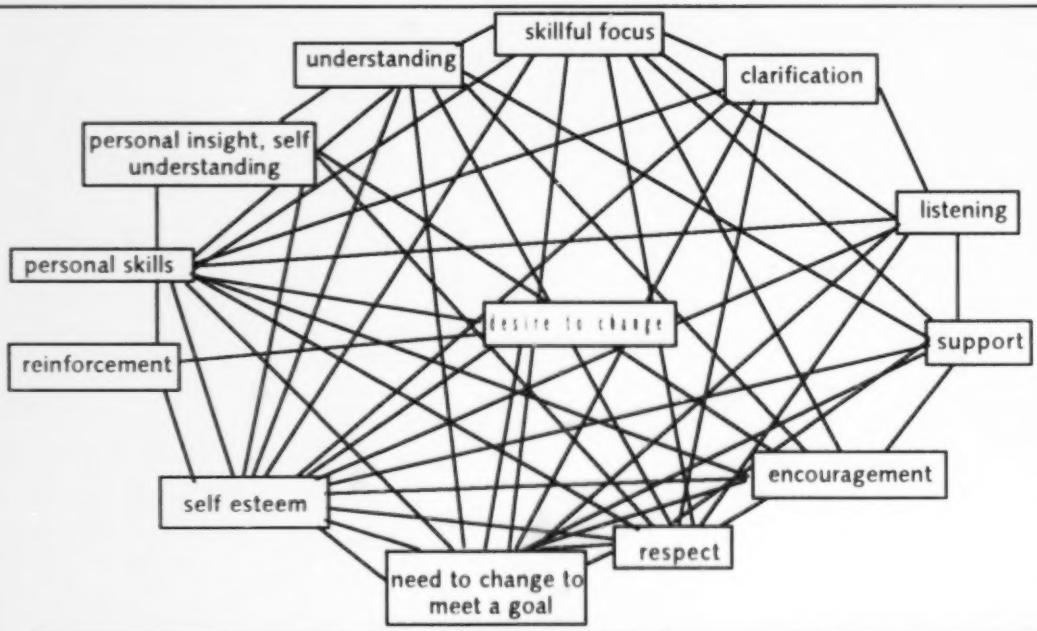
Summary. Noteworthy changes across time were observed for both counseling skill and counselor conceptualization. Important changes in counseling skills were evident from comparing pretest and posttest video taped interviews. Generally, at posttest participants demonstrated nine times fewer closed questions , four times more declarative probes (e.g., "Please, tell me more", "Give me some more details please", etc.), three times more summaries, and three times more meaning reflects. In addition, at posttest there were five times fewer uncodable skills and three times fewer "fused" skills (two or more skills strung together), indicating a more articulate skill usage. Further, the proportion of reflecting skills to total skills used increased at posttest, and the

proportion of uncodeable and "fused" skills to total skills used decreased at posttest.

Counselor Conceptualization

Clear evidence of conceptual change across time was demonstrated in the sorting tasks conducted on the CMTs. The RA's distinguished pretest from posttest maps with 100% accuracy and 100% interrater agreement. Further, maps from the two probe questions demonstrated considerable overlap at pretest, while posttest maps showed more conceptual clarity and distinctiveness. Posttest maps were identified as containing more cohesive conceptual groups and as being more organized and more comprehensive. These changes were more pronounced for CMTs dealing with factors affecting client change than for CMTs dealing with the characteristics of an effective counselor.

The qualitative analysis also depicted change across time. The hypothesis that greater organization would be apparent in posttest maps was borne out by several salient visual changes. The maps in Figure 1, generated in response to the probe question, "What happens during counseling to help clients change?" illustrate this finding. The over-integration of concepts and the lack of clusters in the pretest map (top) indicates an undifferentiated cognitive schema. In contrast, the emergence of three clusters led to a more organized posttest map (bottom). The most striking visual change in the maps overall was this emergence of clusters at posttest. At pretest 49 concepts were "unclustered" overall, while at posttest none remained "unclustered". This was taken as an indication that superordinate schemata were acquired in training. A similar visual change that contributed to a more organized appearance was the emergence of 10 "nested" clusters at posttest, a change from 0 at pretest.



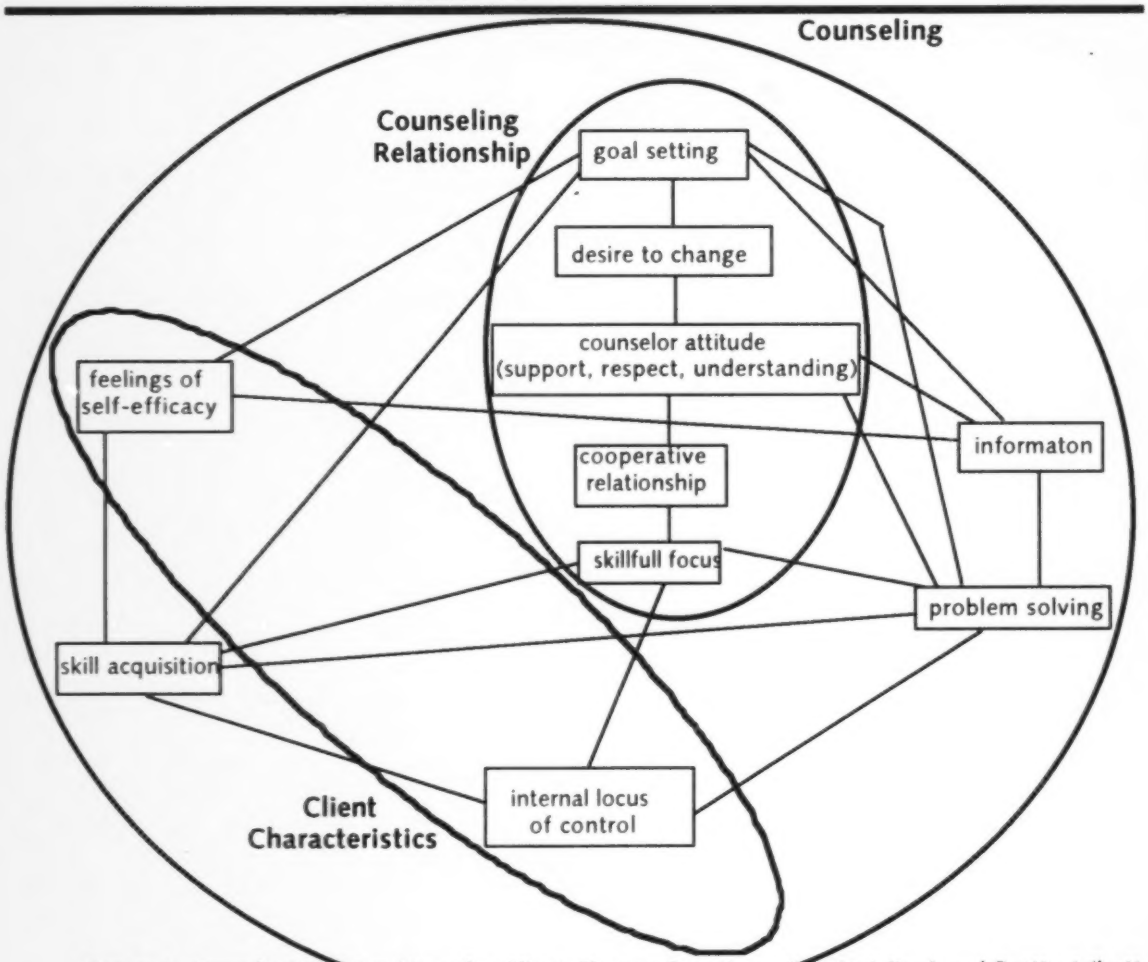


Figure 1. Sample Cognitive Maps for Client Change Question at Pretest (top) and Posttest (bottom).

More evidence supporting this hypothesis came from the CMT criteria charts completed by RA's. RA's indicated that 9 of the 12 pretest maps appeared "disorganized", whereas 10 of the 12 posttest maps appeared "organized".

As hypothesized, posttest maps were more hierarchical. While only one pretest map was structurally hierarchical, six posttest maps were more hierarchical, five structurally and one conceptually. To illustrate the rich source of information the CMT provides, Figure 2 depicts cognitive maps generated in response to the probe question, "What are the characteristics of a good counselor?" The single cluster of concepts at pretest (top) became a hierarchical, tripartite structure at posttest (bottom). The pretest cluster "Empathetic Listening" was replaced by three posttest clusters, "Counselor Personality, Traits, Attitudes", "Counselor Skills", and "Counselor Knowledge", indicating a more differentiated conceptualization of counselor characteristics with training. Quantitative changes were mixed. Increases were seen in extent (10 to 12) and conceptual diversity (1 to 3), while decreases were seen in conceptual interconnection (20 to 13) and integration (2 to 1.08). "Empathetic" was the central concept at pretest (7) along with several other concepts evidencing comparatively high centrality scores. In comparison, the posttest map showed an obvious central concept, "good communication" (11). This change implied a recognition that the concepts "empathy", "interested", and "respectful" were not discrete but form part of a larger picture, namely "good communication".

NOTE: The complete set of cognitive maps for all six participants is displayed in the Appendix at the end of this article.

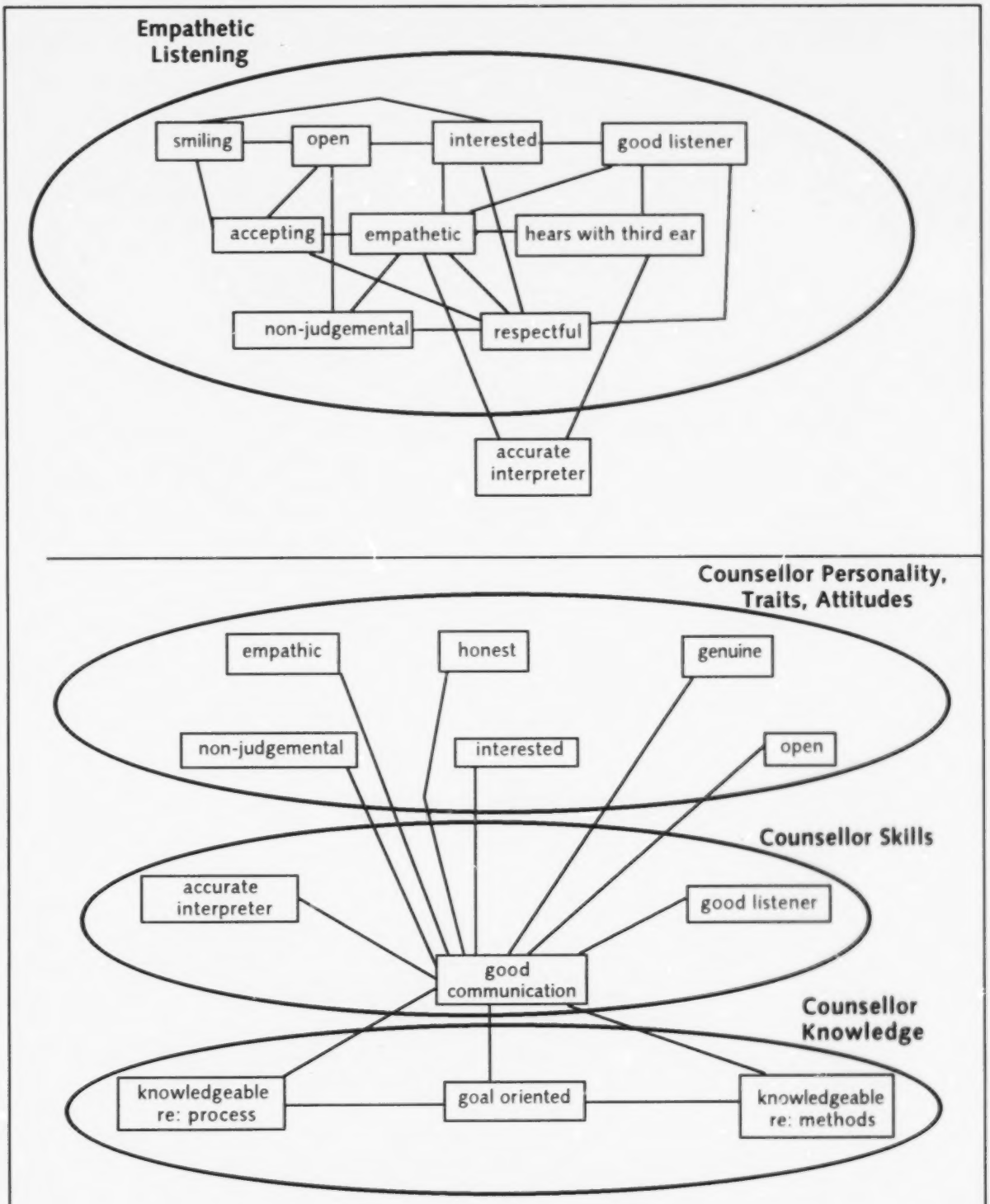


Figure 2. Cognitive Maps for Counsellor Characteristics Question at Pretest (top) and Post-test (bottom).

Counseling Skills and Cognitive Structure

Due to the small sample size, it was not possible to analyze the relationship between conceptual change and change in skill use in any meaningful way. However, several observations were noted that are relevant. The two trainees who demonstrated the most change in skill use also demonstrated substantial change in the CMT. Two other students who demonstrated substantial conceptual change over time had demonstrated effective skill patterns at pretest and had little room to change on their posttest video tapes. In contrast, the remaining two students, whose CMTs showed less change across time, also depicted a mixed pattern of skill change from pretest to posttest.

Discussion

This study provides support for a microcounseling approach to skill training. The microcounseling approach led to improved counseling skill for this group of prepracticum students, adding to the large body of literature attesting to its effectiveness. Changes in structuring skills showed that participants learned to structure their sessions to provide a meaningful context for promoting client insight and facilitating client learning and change. Participants also learned to elicit client learning through appropriate use of soliciting skills. Changes in the reacting skills category indicated more focused skill in providing feedback to the client and checking counselor perceptions of client statements. Overall skill changes conveyed greater clarity, focus, and intentionality in posttest counseling interviews.

The observation that counselor trainees as a group tended to form more cohesive, well-organized, and comprehensive conceptualizations by the end of their prepracticum course is encouraging. It is also encouraging to note that the level of facultative skill use also increased during the course. The

observation that those trainees who demonstrated the most change in skill use also demonstrated very clear conceptual shifts and that those who demonstrated the least change in skill, demonstrated minimal conceptual change across time is also noteworthy. These observations suggest that training in counseling skills could be enhanced by concomitant training in conceptualizing the factors that affect client change. Follow-up validation interviews with our participants support the view that counselor trainees who have a clear and cohesive conceptual model for the factors influencing client change are more likely to have a rationale underlying their use of counseling skills and are more likely to use facilitate, rather than nonfacilitative, skills when information gathering with clients.

The major strength of this study was its utilization of a naturally occurring counselor education context. The major limitation was the small sample size. Lack of statistically significant results in several instances may be bias toward a Type II error. Although the small sample size reduces the power of the statistical tests, it makes the changes that were found quite compelling.

Martin (1984) advocated research to investigate counseling process in naturally occurring environments. Others (Benack, 1988; Borders, Fong-Beyette, & Cron,1988; Hiebert & Noort, 1988; Holloway & Wolleat, 1980) suggested this is particularly important in attempting to identify the kinds of cognitive procedures and skill training sequences that facilitate maximum training effectiveness. This study was an attempt to address these concerns as well as provide information about the nature of change demonstrated by students in prepracticum contexts.

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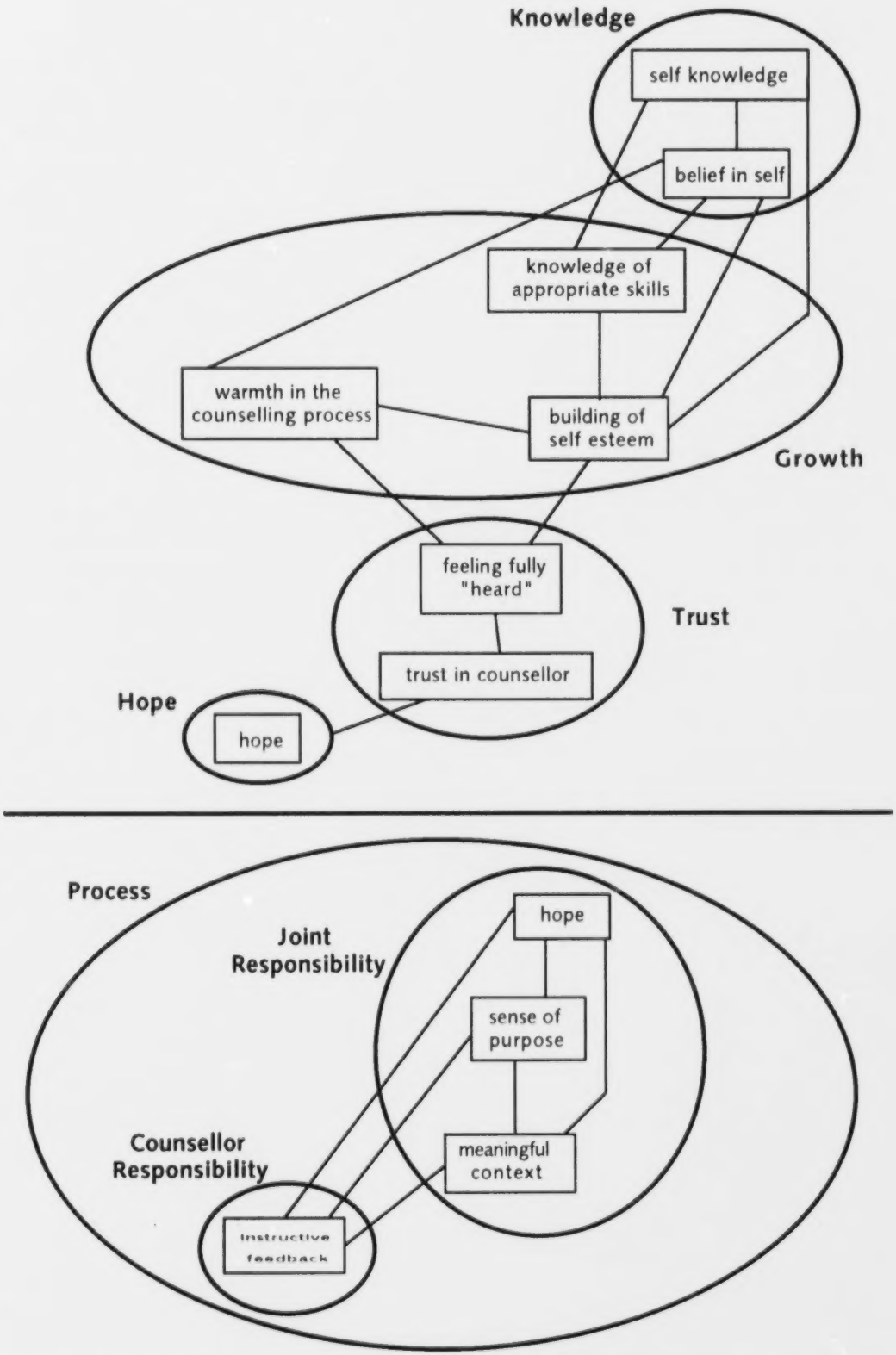
Appendices

The following Figures present the pretest and posttest cognitive maps of all participants in the study.

In each case, the pretest map is presented at the top of the figure and the Posttest map at the bottom of the figure.

The first pair of maps for a participant (odd numbered figures) represent the responses to probe question "What helps clients change in counseling?". The second pair of maps (even numbered figures) represent the responses to the probe question "What are the characteristics of a good counselor?"



Appendix Figure 1. Participant 1: pre-test (top) and post-test (bottom) cognitive maps for "What helps clients change in counselling?"

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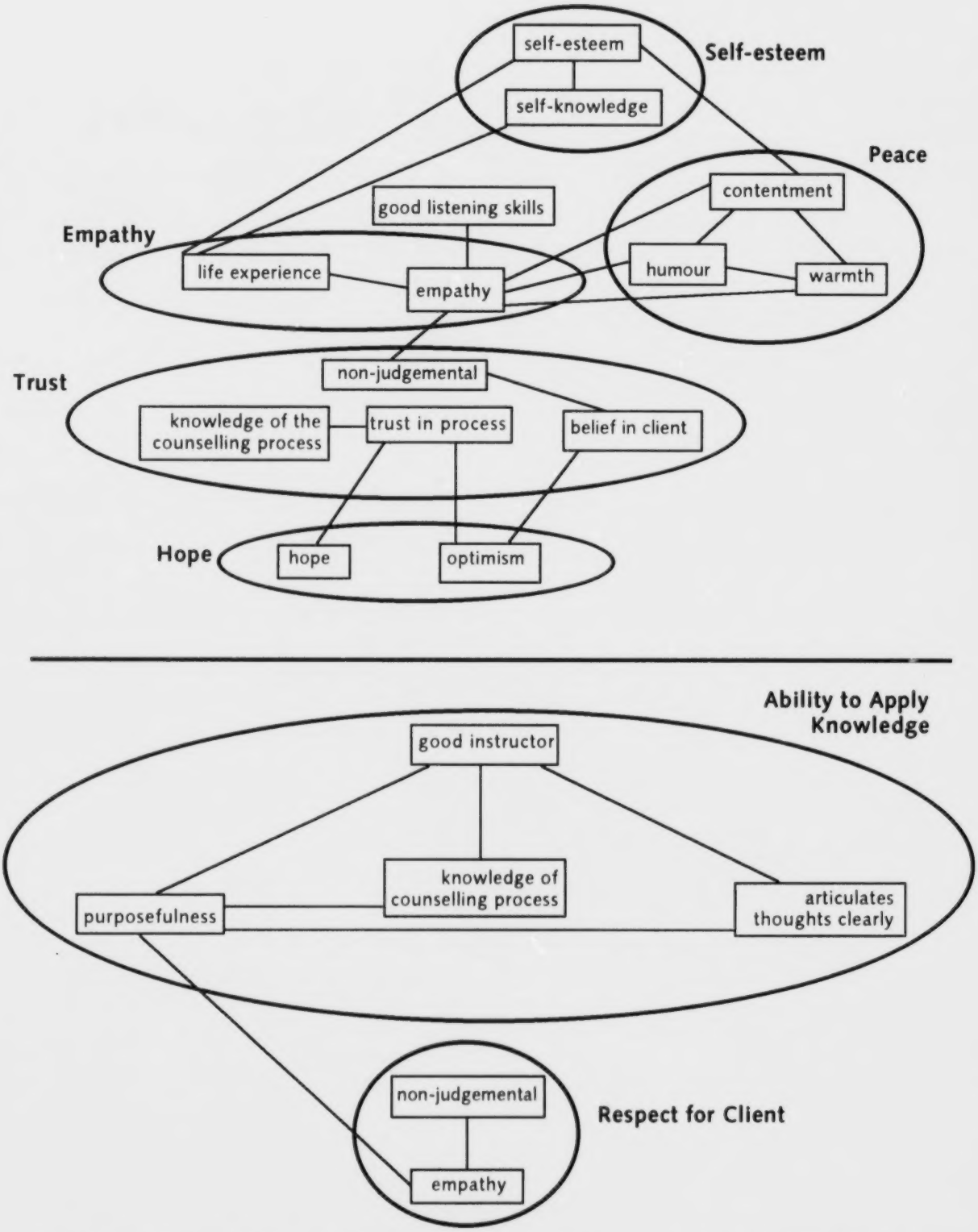
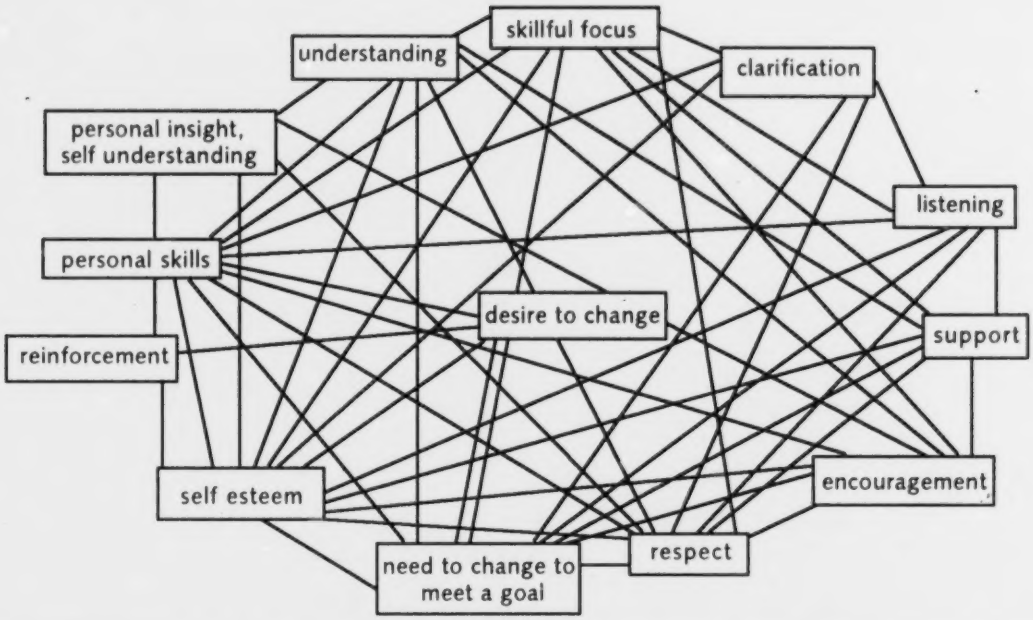
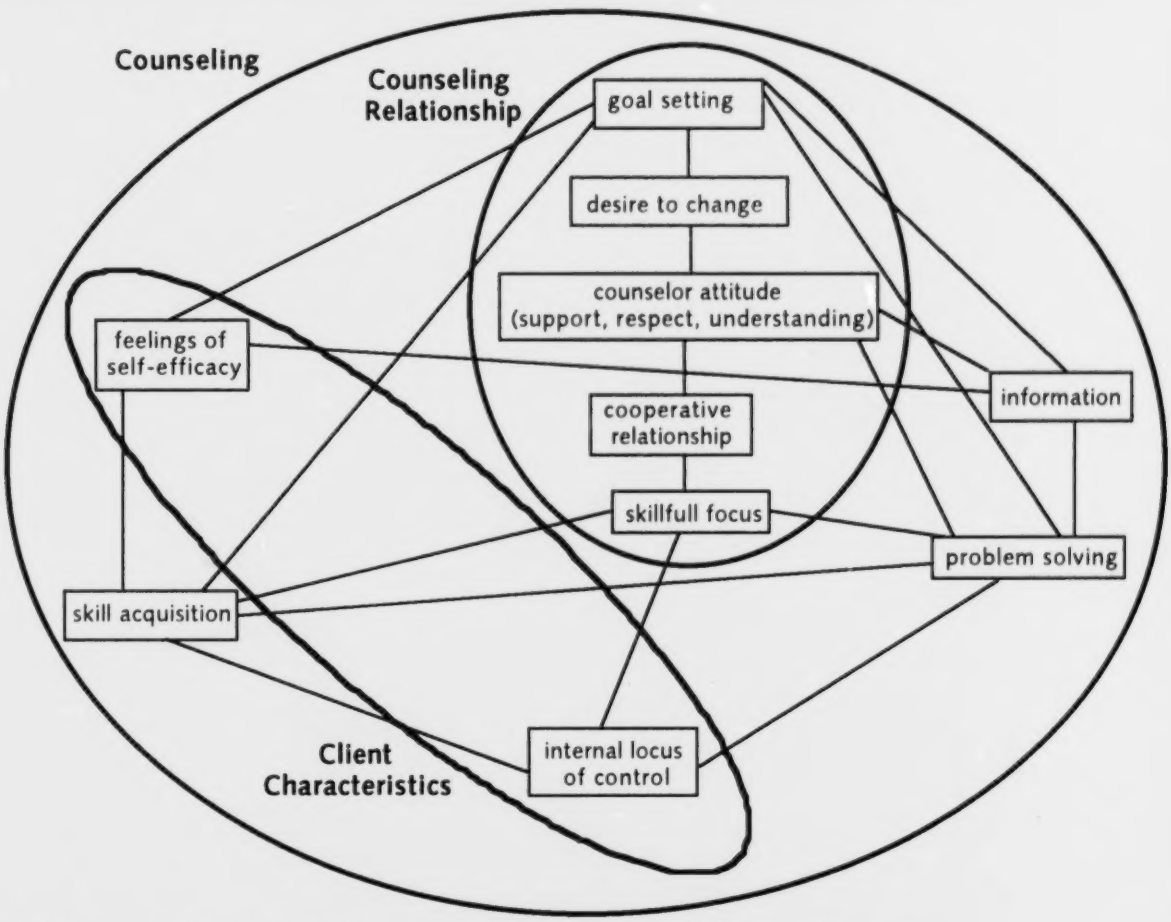
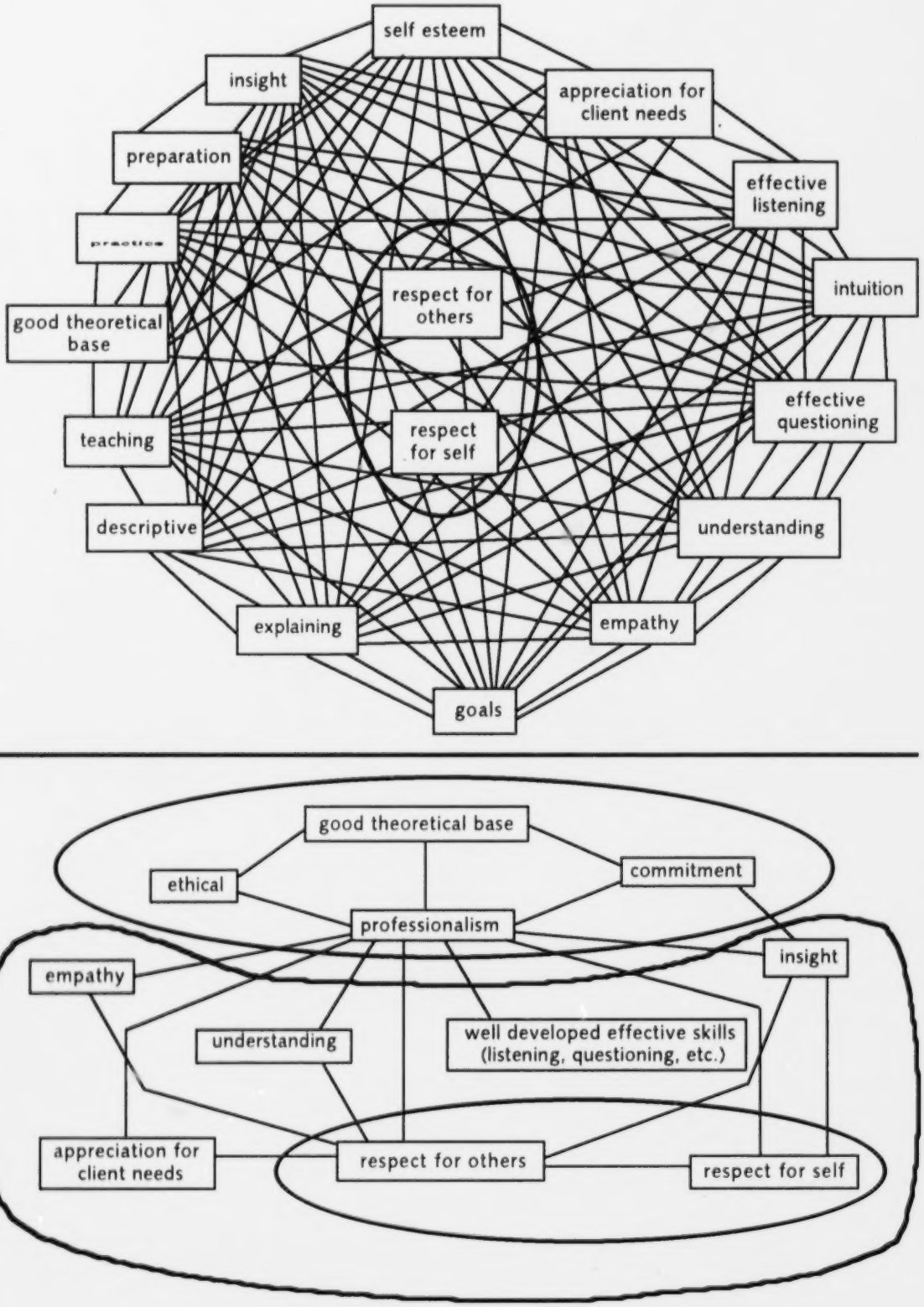


Appendix Figure 2. Participant 1: pre-test (top) and post-test (bottom) cognitive maps for "What are the characteristics of a good counsellor?"

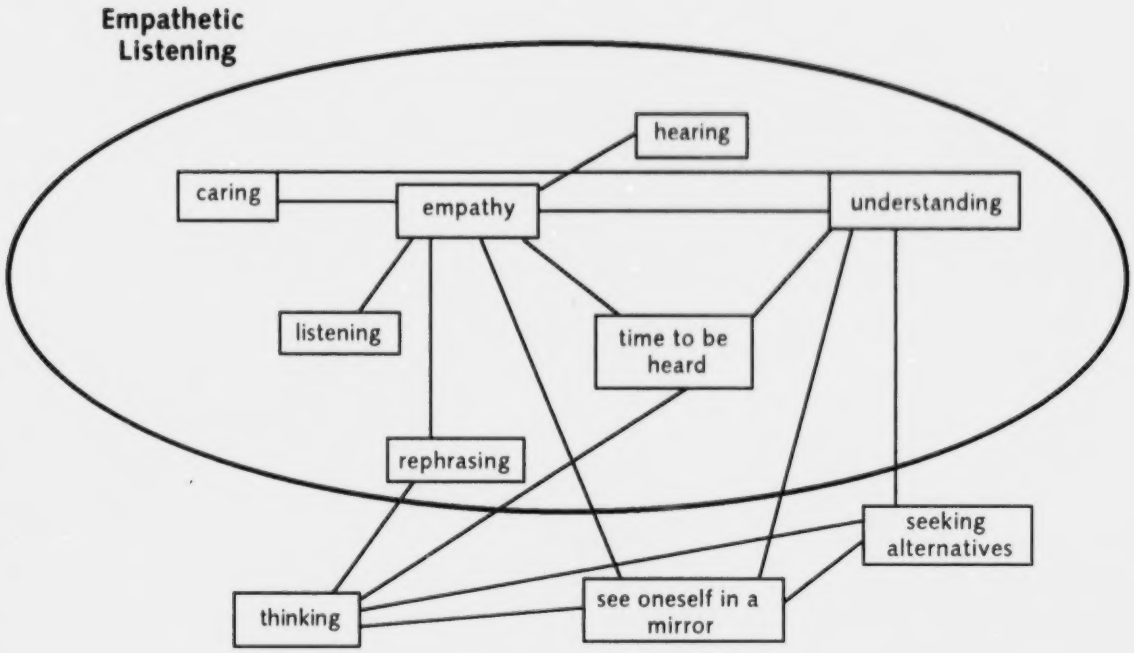


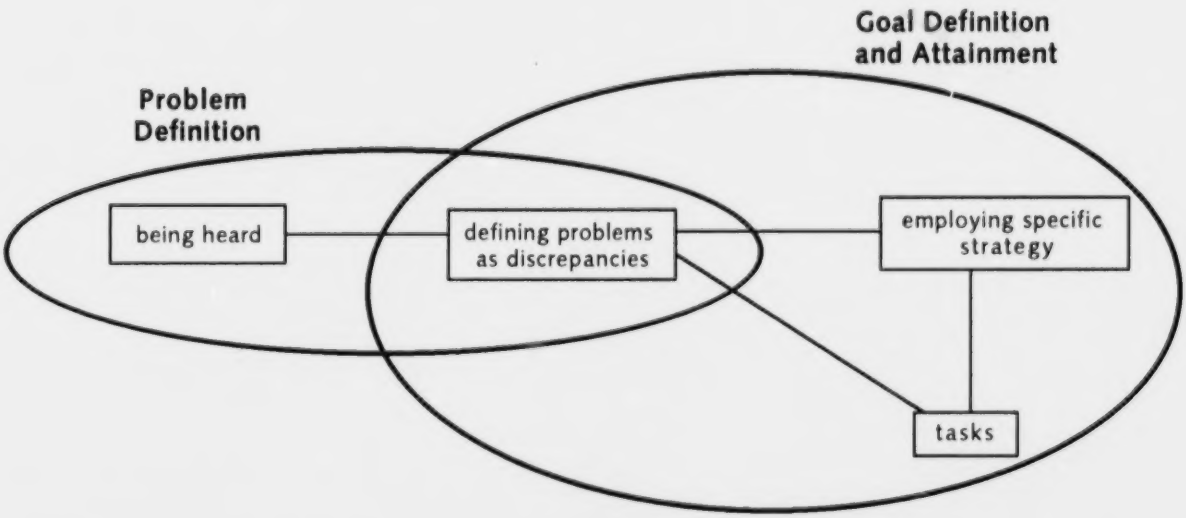


Appendix Figure 3. Participant 2: pre-test (top) and post-test (bottom) cognitive maps for "What helps clients change in counselling?"



Appendix Figure 4. Participant 2: pre-test (top) and post-test (bottom) cognitive maps for "What are the characteristics of a good counsellor?"





Appendix Figure 5. Participant 3: pre-test (top) and post-test (bottom) cognitive maps for "What helps clients change in counselling?"

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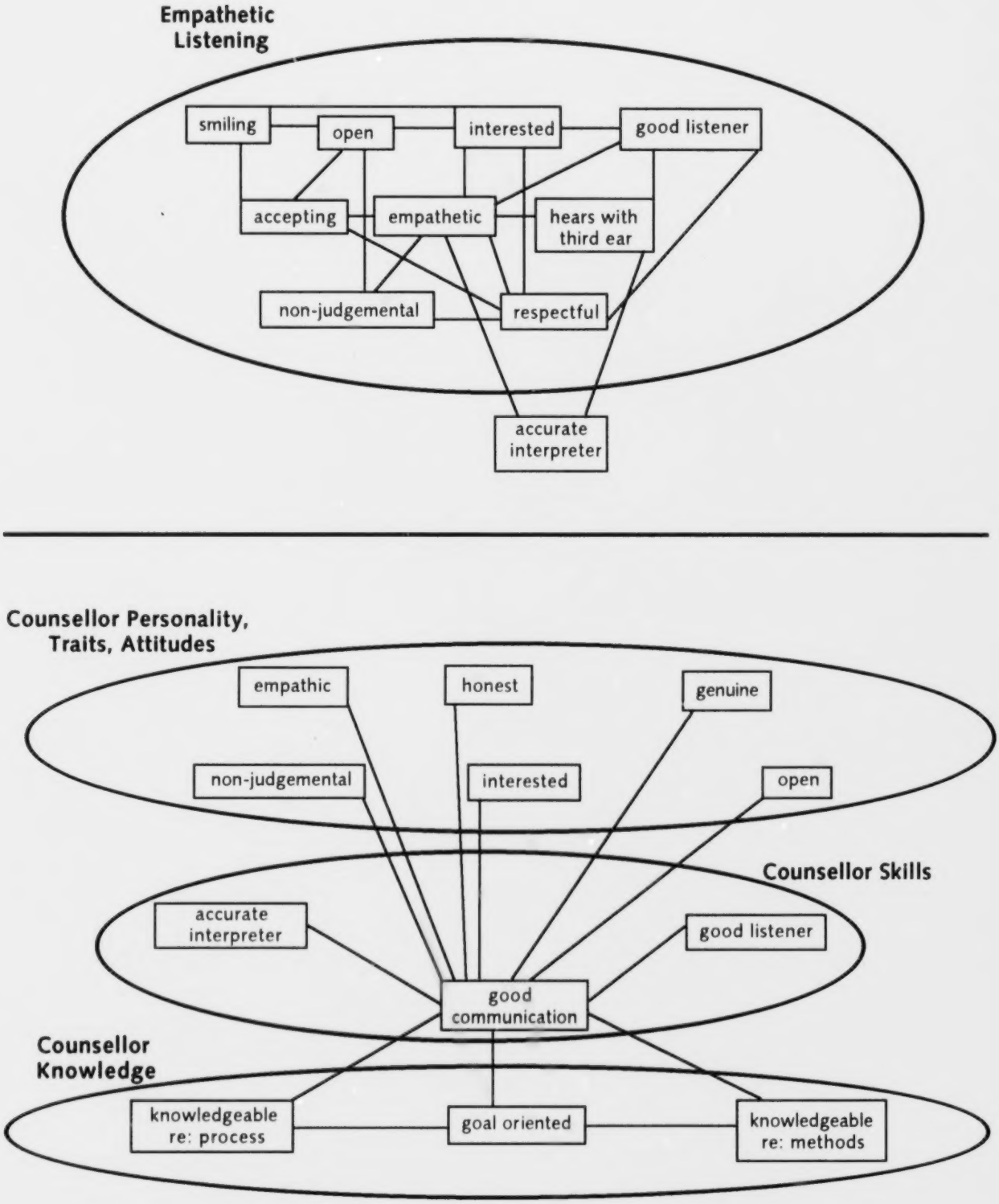
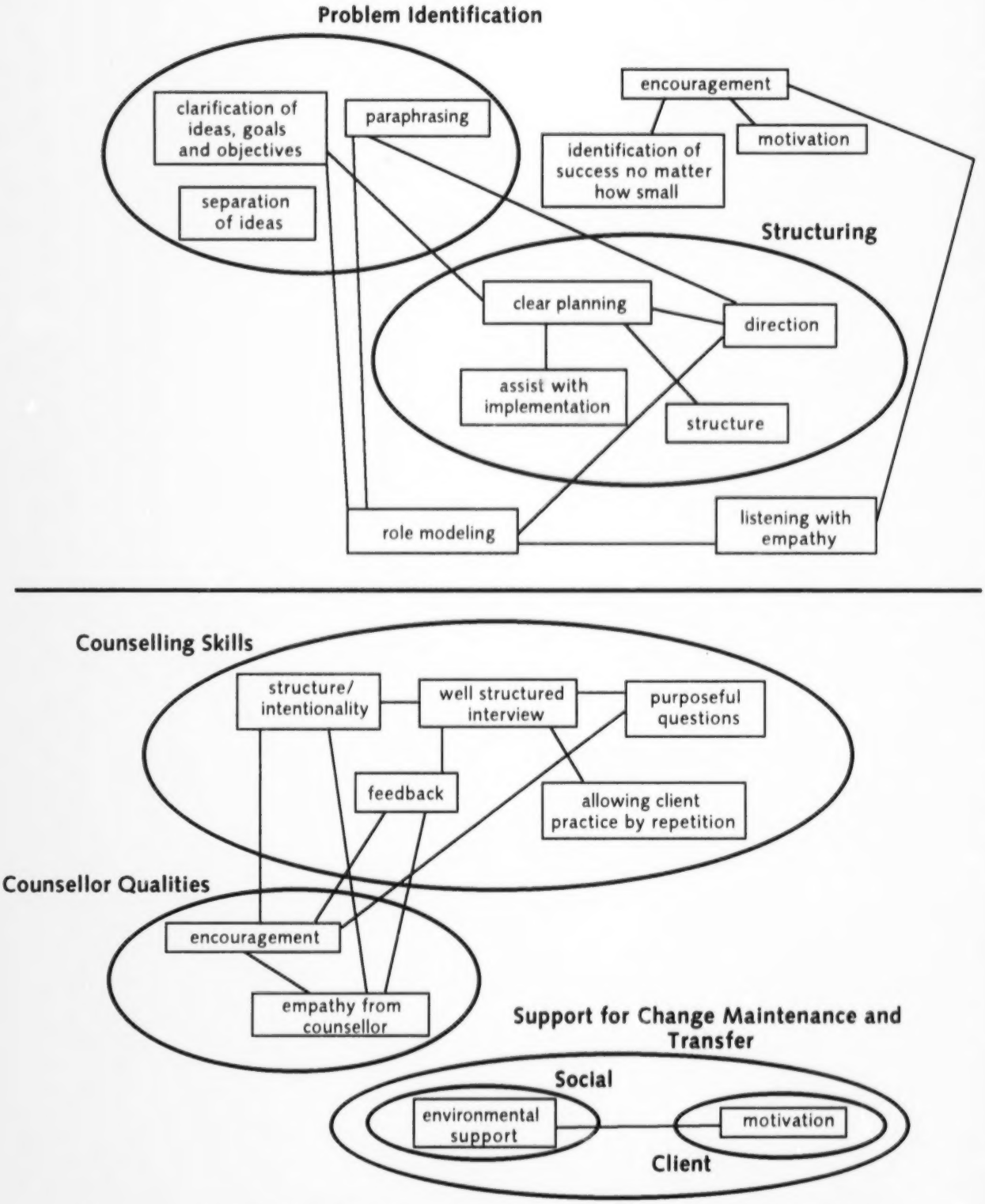
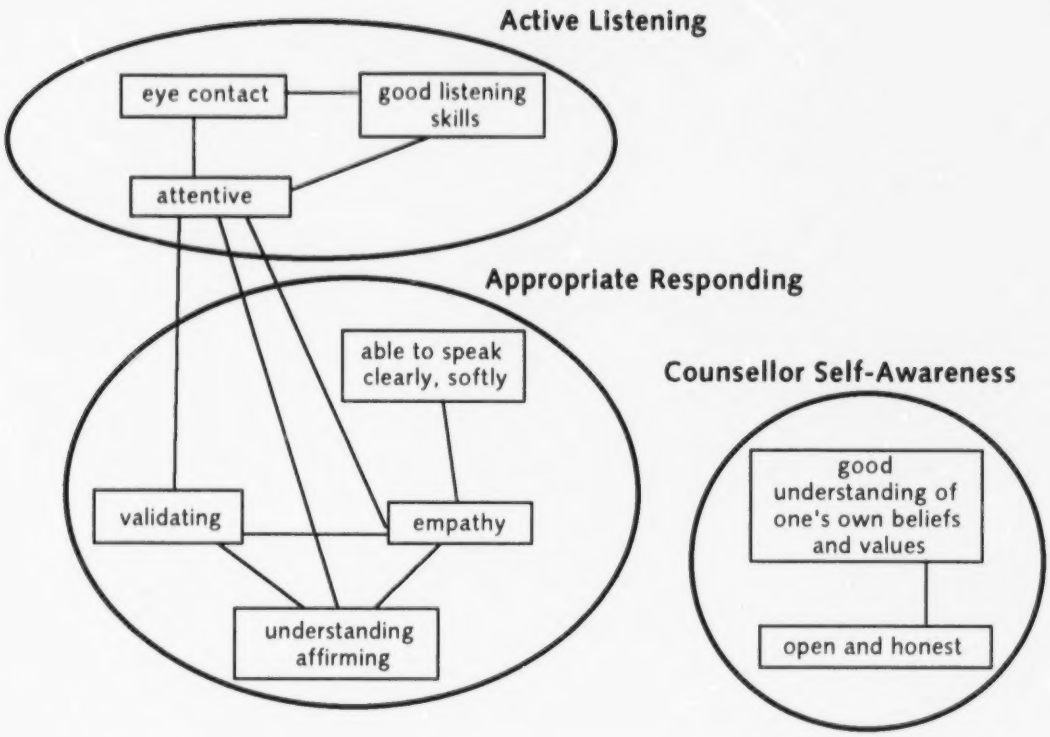
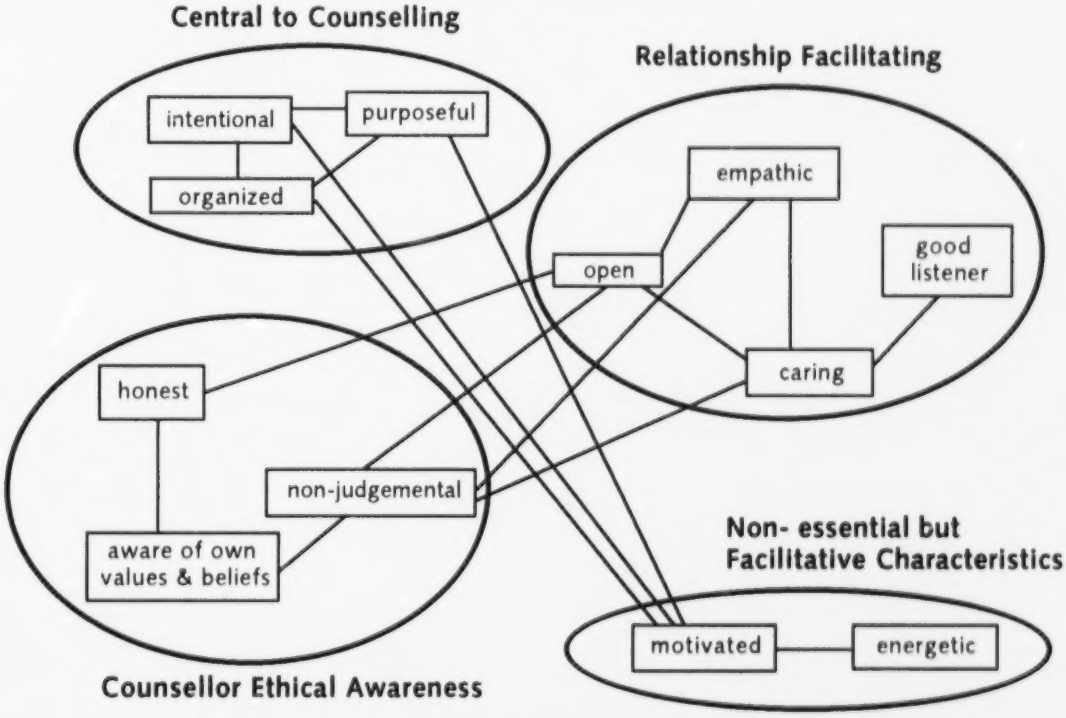


Appendix Figure 6. Participant 3: pre-test (top) and post-test (bottom) cognitive maps for "What are the characteristics of a good counsellor?"

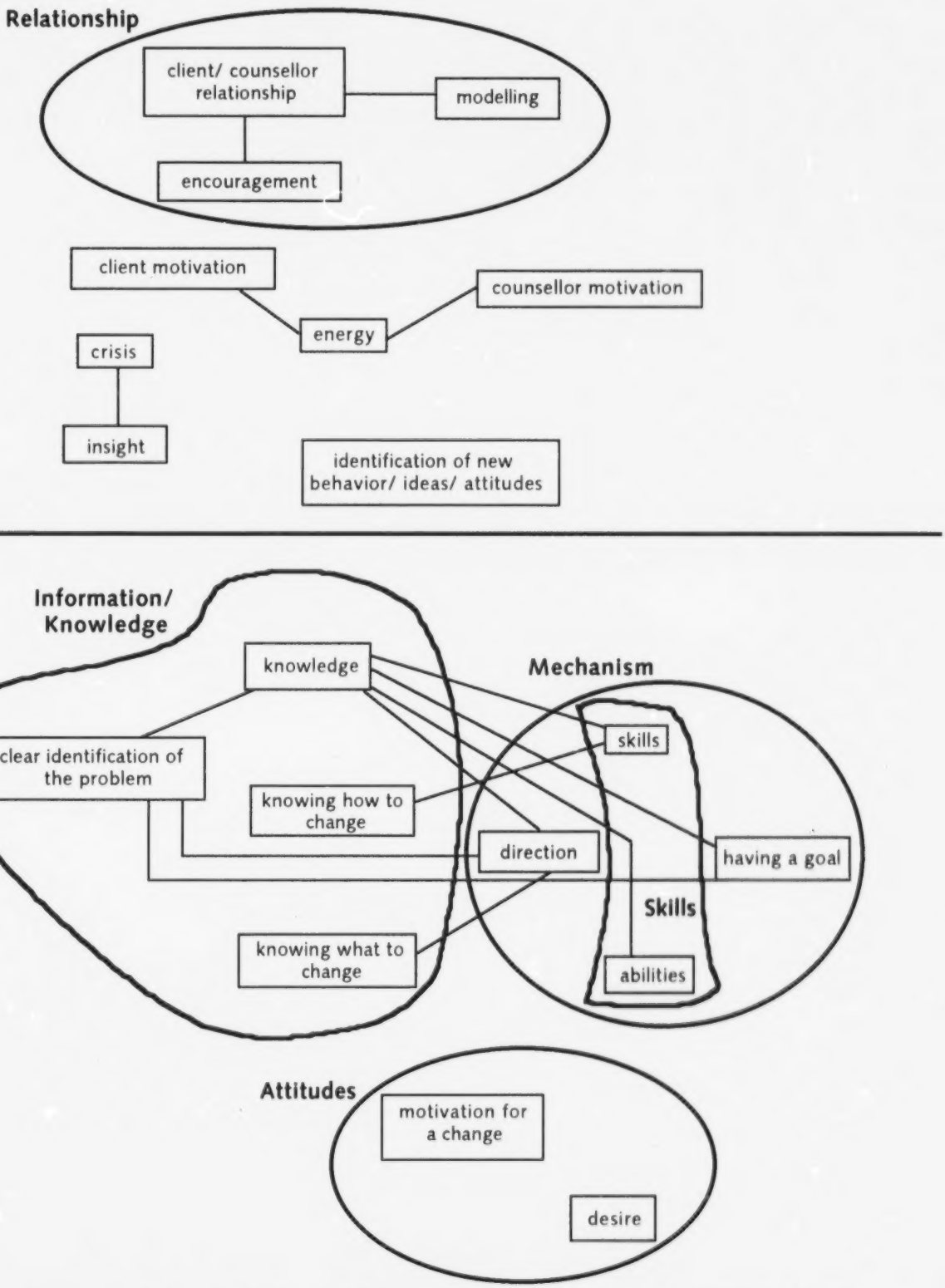


Appendix Figure 7. Participant 4: pre-test (top) and post-test (bottom) cognitive maps for "What helps clients change in counselling?"





Appendix Figure 8. Participant 4: pre-test (top) and post-test (bottom) cognitive maps for "What are the characteristics of a good counsellor?"



Appendix Figure 9. Participant 5: pre-test (top) and post-test (bottom) cognitive maps for "What helps clients change in counselling?"

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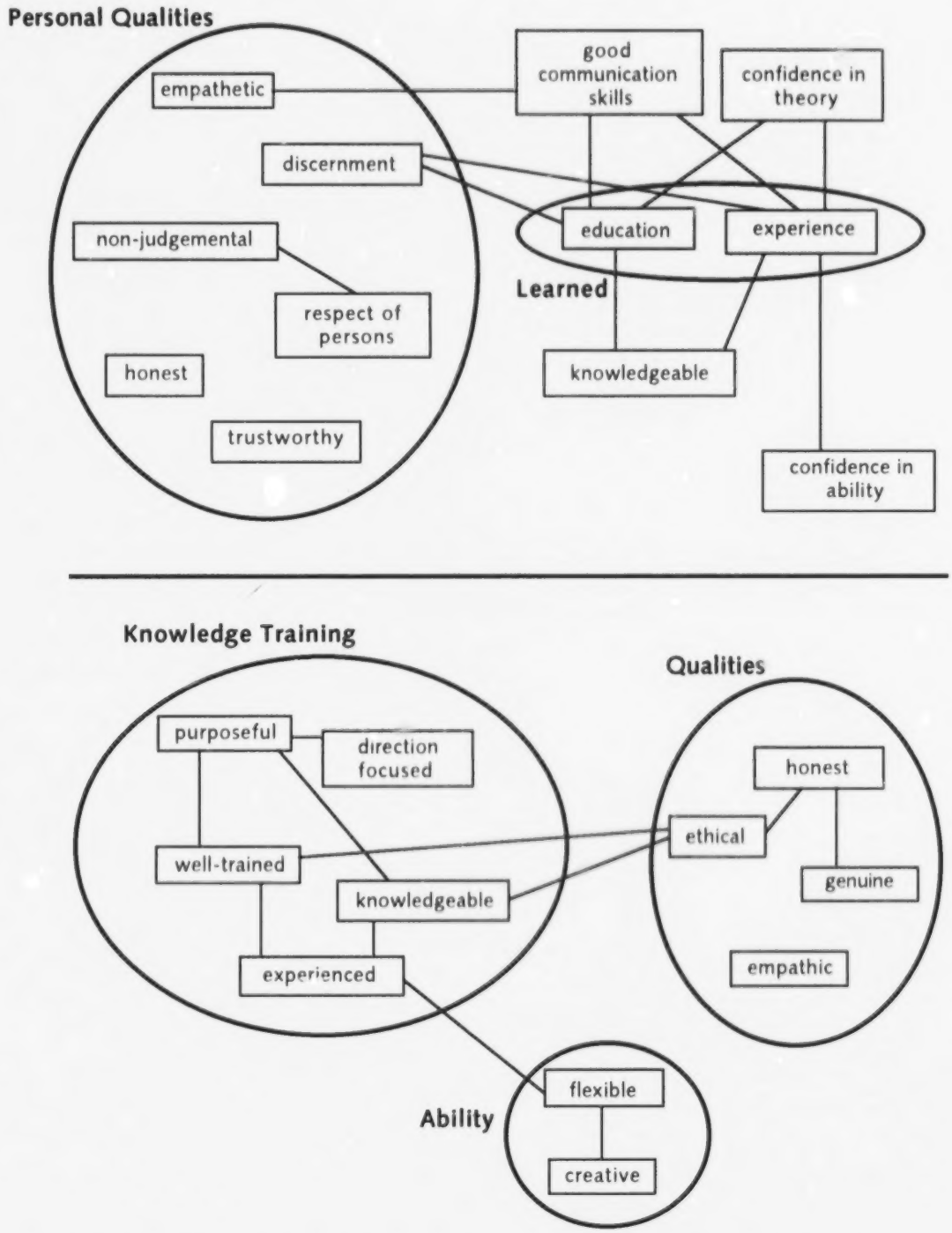
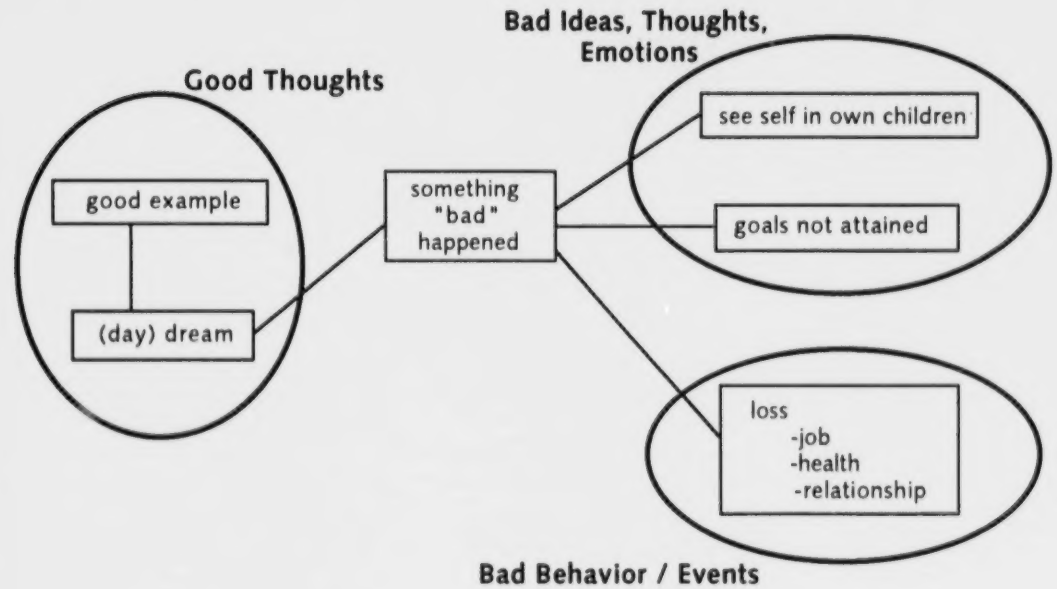
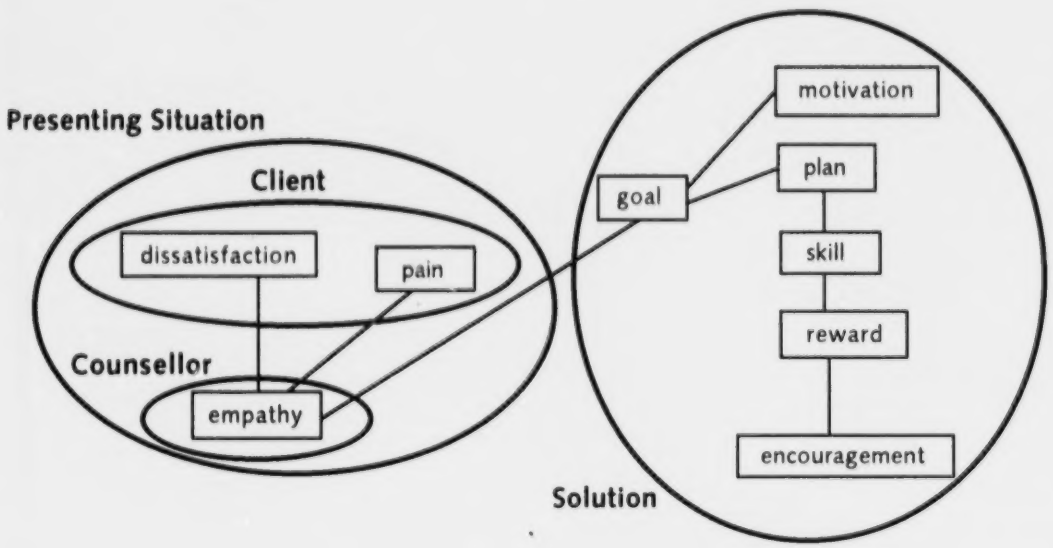
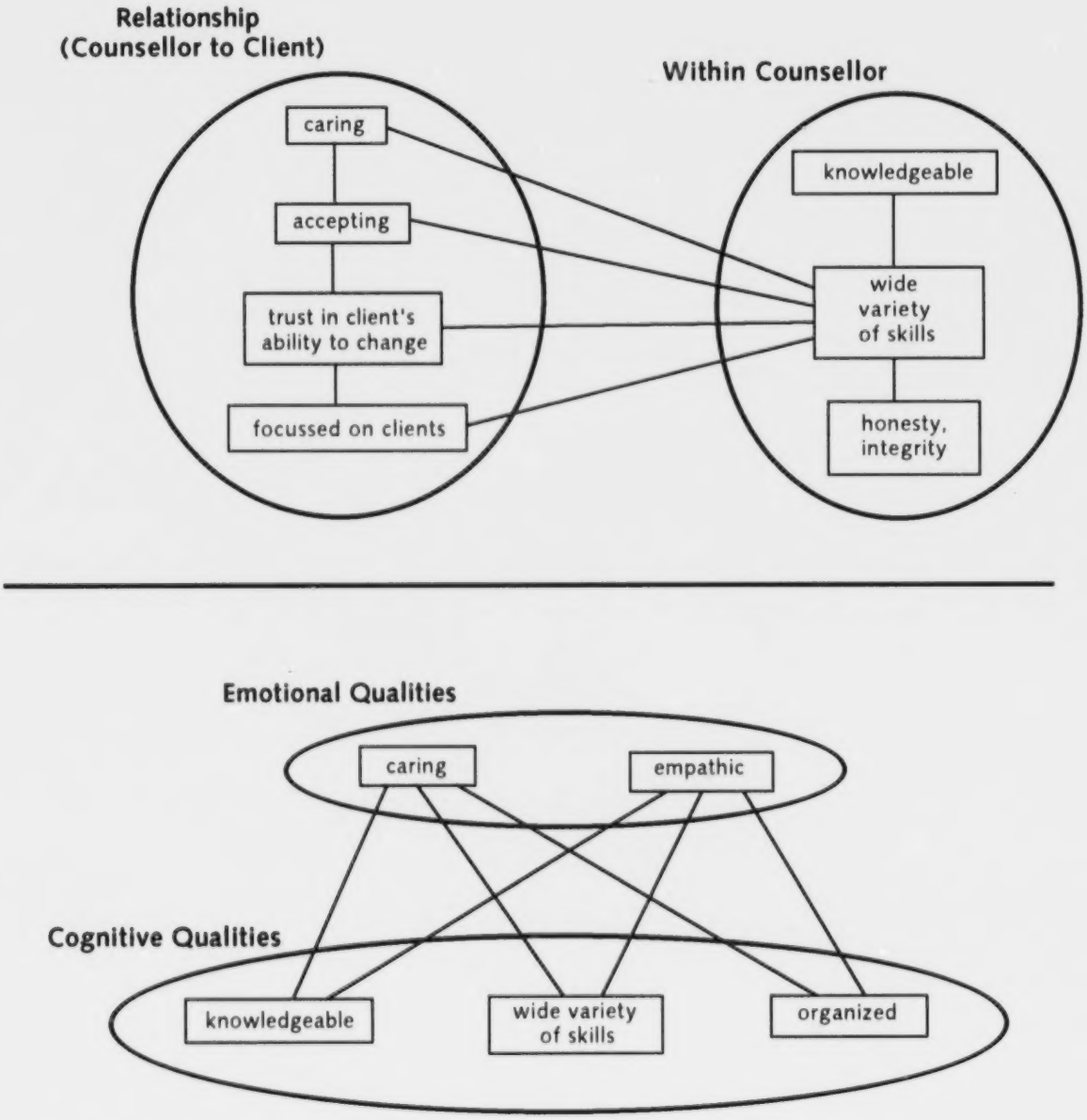


Appendix Figure 10. Participant 5: pre-test (top) and post-test (bottom) cognitive maps for "What are the characteristics of a good counsellor?"





Appendix Figure 11. Participant 6: pre-test (top) and post-test (bottom) cognitive maps for "What helps clients change in counselling?"



Appendix Figure 12. Participant 6: pre-test (top) and post-test (bottom) cognitive maps for "What are the characteristics of a good counsellor?"